5. **(Currently Amended)** A method to reduce the absorption of ultraviolet radiation by the skin of a mammal, the method comprising:

providing a formulation comprising nucleic acids having one or more R-group substitutions; and a compound selected from the group consisting of ~~phynylalanine~~phenylalanine, ~~trytophan~~tryptophan, tyrosine, keratin, albumin, collagen, elastin, riboflavin, and retonoic acid; and

applying said formulation to the skin of a mammal to reduce the absorption of ultraviolet radiation by the skin of said mammal.

6. (Original) The method of claim 5, wherein the nucleic acids are DNA.

7. **(Currently Amended)** The method of claim 5, wherein the nucleic acids are DNA of an average size **of** at least about 100 base pairs.

8. (Original) The method of claim 5, wherein the ultraviolet radiation is UVB radiation.

9. (Previously amended) The method of claim 5, wherein applying said formulation to said mammal results in a reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

10. (Previously amended) The method of claim 5, wherein applying said formulation to said mammal results in at least about a 90% reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

11. (Previously amended) The method of claim 5, wherein applying said formulation results in at least about a 95% reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

12. (Previously amended) The method of claim 5, wherein applying said formulation results in at least about a 99% reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

13. (Previously amended) The method of claim 5, wherein the ultraviolet radiation absorbed by the skin of the mammal is less than a minimum erythemal dose for the mammal after a one hour exposure to the ultraviolet radiation.

14. (Previously amended) The method of claim 5, wherein the ultraviolet radiation absorbed by the skin of the mammal is less than a minimum erythemal dose for the mammal after a four hour exposure to the ultraviolet radiation.

15. (Previously amended) The method of claim 5, wherein the ultraviolet radiation absorbed by the skin of the mammal is less than a minimum erythemal dose for the mammal after an eight hour exposure to the ultraviolet radiation.

16. (Original) The method of claim 5, wherein the mammal is human.

17. (Original) The method of claim 5, wherein the mammal is a dog or a cat.

Claims 18-34 previously cancelled without prejudice or disclaimer.

35. (Previously amended)The method of claim 5, wherein the nucleic acids are modified by ethylation, cross linking, ultraviolet induced cross-linking, or the formation of thymidine dimers.

36. (Previously amended) The method of claim 5, wherein the nucleic acids are less than 100 base pairs.

37. (Previously amended) The method of claim 5, wherein the nucleic acids are in a cholerestic liquid phase, a lyotropic liquid crystal phase, or a precholesteric phase.

38. (Previously amended) The method of claim 5, wherein the nucleic acids are single stranded, double stranded, or triple stranded.

39. (Previously amended) The method of claim 5, wherein the formulation further comprises a compound selected from the group consisting of apurinic acids, purines, and uric acids.

40. **(Currently Amended)** The method of claim 5, wherein the formulation further comprises a compound selected from the group consisting of water, alcohols, water-soluble alcohols, ~~**dimethyl sulfa oxide**~~**dimethyl sulfoxide**, antifungal agents, antibacterial agents, buffers, perfumes, dyes, aloe, and sorbitols.

Claim 41 was previously cancelled without prejudice or disclaimer.

42. **(Currently Amended)** The method of claim 40, wherein the **formulation further comprises a** buffer and **said buffer is selected from the group consisting of** phosphate, HEPES, **and** TRIS.

Claims 43-46 were previously cancelled without prejudice or disclaimer.

47. **(Currently Amended)** A method to reduce the absorption of ultraviolet radiation by the skin of a mammal, the method comprising:

providing a formulation ~~**comprising a**~~**consisting essentially of** nucleic acid**s**, ~~**the nucleic acid**~~ having ~~**a molecular weight**~~ greater than 5000 base pairs; and

applying the formulation to the skin of a mammal to reduce the absorption of ultraviolet radiation by the skin of said mammal.

Claims 48-52 were previously cancelled without prejudice or disclaimer.

53. (Previously Added) The method of claim 47, wherein the nucleic acid is DNA.

54. **(Currently Amended)** The method of claim 47, wherein the nucleic acid is DNA of an average size **of** at least about ~~**10**~~**10,000** base pairs.

55. (Previously Added) The method of claim 47, wherein the ultraviolet radiation is UVB radiation.

56. (Previously Added) The method of claim 47, wherein applying said formulation to said mammal results in a reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

57. (Previously Added) The method of claim 47, wherein applying said formulation to said mammal results in at least about a 90% reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

58. (Previously Added) The method of claim 47, wherein applying said formulation results in at least about a 95% reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

59. (Previously Added) The method of claim 47, wherein applying said formulation results in at least about a 99% reduction in the amount of ultraviolet radiation absorbed by the skin of said mammal.

60. (Previously Added) The method of claim 47, wherein the ultraviolet radiation absorbed by the skin of the mammal is less than a minimum erythemal dose for the mammal after a one hour exposure to the ultraviolet radiation.

61. (Previously Added) The method of claim 47, wherein the ultraviolet radiation absorbed by the skin of the mammal is less than a minimum erythemal dose for the mammal after a four hour exposure to the ultraviolet radiation.

62. (Previously Added) The method of claim 47, wherein the ultraviolet radiation absorbed by the skin of the mammal is less than a minimum erythemal dose for the mammal after an eight hour exposure to the ultraviolet radiation.

63. (Previously Added) The method of claim 47, wherein the mammal is human.

64. (Previously Added) The method of claim 47, wherein the mammal is a dog or a cat.

65. **(New)** The method of claim 47, wherein the formulation further comprises a compound selected from the group consisting of phenytalnine, tryptophan, tyrosine, keratin, albumin, collogen, elastin, riboflavin, and retonoic acid.

66. **(New)** The method of claim 47, wherein the nucleic acids are modified by ethylation, cross-linking, ultraviolet induced cross-linkings, or the formation of thymidinediners.

67. **(New)** The method of claim 47, wherein the nucleic acids are in a cholerestic liquid phase, a lyotropic liquid crystal phase, or a precholesteric phase.

68. **(New)** The method of claim 47, wherein the formulation further comprised a compound selected from the group consisting of apurinic acids, purines, and uric acids.

69. **(New)** The method of claim 47, wherein the formulation further comprises a compound selected from the group consisting of water, alcohols, water-soluble alcohols, dimethyl sultoxide, antifungal agents, antibacterial agents, buffers, perfumes, dyes, aloe, and sorbitols.

REMARKS

The application has been reviewed in light of the Office Action mailed January 13, 2003. At the time of the Office Action, Claims 5-17, 35-40, 42, 47, and 53-64 were pending